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/Nicole Pannoni/
Nicole Pannoni

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of:

Bart Alan MELTZER et al.

Application No. 09/173,858

Confirmation No. 4734

Filed: 16 October 1998

Title: **Documents for Commerce in Trading
Partner Networks and Interface
Definitions Based on the Documents**

Group Art Unit: 2178

Examiner: HUYNH, Cong Lac T.

CUSTOMER NO. 22470

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

APPEAL BRIEF – SECOND APPEAL

Sir:

This Appeal Brief is filed in support of Appellants' second appeal, this time from the Office Action mailed October 9, 2008. A Notice of Appeal was filed December 8, 2008.

TABLE OF CONTENTS

I. Real Party in Interest.....	1
II. Related Appeals and Interferences.....	1
III. Jurisdictional Statement.....	1
IV. Status Of Claims	1
IV-A Status Of Amendments.....	1
V. Summary of Claimed Subject Matter.....	1
VI. Issues/Rejections To Be Reviewed On Appeal.....	3
VII. Grouping Of Claims	3
VIII. Argument	4
A. Statement of Facts.....	4
1. Introductory Statement Regarding the General Area of Technology	4
2. Facts Related to the Application.....	5
3. Facts Related to the Prior Appeal.....	5
4. Facts Related to General Errors in Examination	6
a. Undisputed Facts Regarding Actual Reduction to Practice of the Claimed Technology Before January 21, 1998, Eight Months Before Publication of McKendrick Reference.	6
b. Undisputed Facts Regarding Actual Reduction to Practice of the Claim Technology on or Before July 25, 1998, Two Months Before Publication the McKendrick Reference.	7
c. Undisputed Facts Regarding the Level of Ordinary Skill in the Art in September-October, 1998.....	8
d. Undisputed Facts Regarding How One of Ordinary Skill in the Art Would Have Understood the McKendrick Reference in September, 1998.	8
e. Undisputed Facts Regarding Actual Reduction to Practice of Subject Matter in Individual Claims.	9
5. Facts Regarding Limitations in Individual Claims for Which McKendrick Provides No Written Description or Enabling Disclosure.....	14
B. The Examiner Erred in Rejecting Each of the Pending Claims 1-16 and 61-74 Under 35 U.S.C. § 103(a) Because the Undisputed Evidence Establishes Actual Reduction to Practice of the Claimed Technology Before the September, 1998 Publication of McKendrick's Brief Article.	20
1. The Examiner Erred in Rejecting Claims 1-16 and 61-74 Because the Undisputed Evidence of Record Proves Actual Reduction to Practice Before January 21, 1998, in Preparation for a Scheduled Demonstration to a Prospective Customer.	20

2. The Examiner Erred in Rejecting Claims 1-16 and 61-74 Because the Undisputed Evidence of Record Proves Actual Reduction to Practice on or before July 25, 1998, When Dr. Glushko Described Actual Use of the Claimed Technology at the International Workshop on Component-Based Electronic Commerce, Haas School of Business, University of California, Berkeley	22
3. The Examiner Erred in Rejecting the Claims Based on McKendrick's Brief Article Because the Undisputed Evidence Regarding Each of the Claims 1-16 and 61-74 Removes McKendrick as a Reference.	23
C. The Examiner Erred in Rejecting Each of the Pending Claims 1-16 and 61-74 under 35 U.S.C. § 103(a) Because the Undisputed Evidence Establishes That One of Ordinary Skill in the Art Would Not Find McKendrick's Brief Article in Combination With the XML v1.0 Recommendation to Provide a Written Description or Enabling Disclosure of the Claimed Interface Definition and Programming Technologies.	24
1. The Examiner Erred in Failing to Evaluate the Level of Ordinary Skill in the Art, circa 1998, Based on the Evidence of Record.	24
2. The Examiner Erred Failing to Reevaluate McKendrick's Brief Article in View of the Level of Ordinary Skill in the Art, circa 1998, and in View of Evidence Regarding the Microsoft Initiatives That McKendrick Was Reporting.	25
3. The Examiner Erred in Rejecting the Claims (Grouped as 1, 2, 8-12, 15, 73 & 74; 5-6 & 65; 7; 13; 14; 16; 61, 66-71; and 72) Under Section 103(a) Because the References Cited Fail to Provide a Written Description or Enabling Disclosure of the Claimed Technology.	26
a. The Examiner Erred in Rejecting the Claims 1, 2, 4, 8-12, 15, 64, 73 & 74 Under Section 103(a) Because the References Cited Fail to Provide a Written Description or Enabling Disclosure of the Claimed Technology.	27
b. The Examiner Erred in Rejecting the Claims 5-6 & 65 Under Section 103(a) Because the References Cited Fail to Provide a Written Description or Enabling Disclosure of the Claimed Technology.	30
c. The Examiner Erred in Rejecting the Claim 7 Under Section 103(a).	31
d. The Examiner Erred in Rejecting the Claim 13 Under Section 103(a).	31
e. The Examiner Erred in Rejecting the Claim 14 Under Section 103(a).	32
f. The Examiner Erred in Rejecting the Claim 16 Under Section 103(a).	32
g. The Examiner Erred in Rejecting the Claims 61 & 66-71 Under Section 103(a).	33
h. The Examiner Erred in Rejecting Claim 72 Under Section 103(a).	33
D. The Examiner Erred in Rejecting Claims 73-74 Under 35 U.S.C. § 112 Because the Word "Operations" in Claim 73 is Readily Understood by Reference to the Specification and the Extensive Code Samples of "Service Operations."	34
1. Section 112, First Paragraph.	34
2. Section 112, Second Paragraph.	35

IX. CONCLUSION	36
X. CLAIMS APPENDIX.....	37

SEPARATELY BOUND RECORD APPENDIX

(Volume 1)

XI. RELATED CASES APPENDIX

I. Appeal No. 2006-0639, thus Application No. 09/173,858

Decision on Appeal dated August 31, 2006.....	R-2
Request for Rehearing Denied dated May 21, 2007.....	R-22
Denial of Petition for Rehearing and Oral Argument dated September 17, 2007	R-30

XII. EVIDENCE APPENDIX

I. Office Action

Office Action Setting Out Rejection on Appeal dated October 9, 2008.....	R-36
Original Application Referenced in OA dated October 16, 1998.....	R-59

II. Evidence Relied Upon By the Examiner

McKendrick Reference	R-190
<i>McKendrick, Banks begin to play with XML</i> , Bank Technology News, Sep. 1998, Vol. 11, Iss. 9, pg. 6, 2 pgs.	
XML 1.0 Reference.....	R-194
<i>W3C, Extensible Markup Language (XML) 1.0</i> , 2/10/98, pages 1-37.	

(Volume 2)

III. Papers Filed by Appellants (Relevant Prosecution History)

Request for Continued Examination dated July 23, 2008	R-233
Final Office Action dated January 23, 2008	R-270
Response to Final Office Action filed July 21, 2008.....	R-293

IV. Declarations Under Rule 131 Proving Reduction to Practice On or Before January 21, 1998

Decision on Petition Granted August 14, 2008	R-323
Inventors' Declarations	

Declaration of Murray Maloney	R-326
Declaration of Bart Alan Meltzer.....	R-341
Declaration of Robert John Glushko	R-356
Declaration of Matthew Fuchs.....	R-371
Non-Inventor's Declaration	
Declaration of Kevin Hughes.....	R-386
V. Other Evidence (Exhibits A-W; See Table of Exhibits)	(Volume 3)
Exhibit A	R-402
Exhibit B	R-411
Exhibit C	R-421
Exhibit D	R-428
Exhibit E	R-476
Exhibit F.....	R-570
Exhibit G	R-578
Exhibit H	R-581
	(Volume 4)
Exhibit I.....	R-648
Exhibit J	R-681
Exhibit K	R-686
Exhibit L.....	R-715
Exhibit M.....	R-718
Exhibit N	R-728
Exhibit O	R-739
	(Volume 5)
Exhibit P	R-744
Exhibit Q.....	R-775
Exhibit R	R-791
Exhibit S	R-802
Exhibit T.....	R-809
Exhibit U	R-812
Exhibit V	R-849
Exhibit W	R-854

TABLE OF EXHIBITS

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- D. Selected files from cbl/072 directory (date stamped in 1997) (R-428)
- E. Selected files from cbl/075 directory (date stamped before January 21, 1998) (R-476)
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- H. Selected files from cbl/ingram/01 directory (date stamped before January 21, 1997) (R-581)
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<i>C.R. Bard, Inc. v. U.S. Surgical Corp.</i> , 388 F.3d 858, 865 (Fed. Cir. 2004)	27
<i>Ex Parte Foster</i> , 105 O.G. 261 (Comm'r Pat. 1903).....	22
<i>Ex parte Jud</i> , Appeal No. 2006-1061 (Jan. 30, 2007)	28
<i>Ex parte Jud</i> , Appeal No. 2006-1061, 2007 Pat. App. LEXIS 9, (BPAI Jan. 30, 2007) .	24
<i>Ex parte Ovshinsky</i> , 10 U.S.P.Q.2d (BNA) 1075 (Bd. Pat. App. & Inter. 1989).....	20, 22
<i>Ex parte Swaney and Banes</i> , 89 U.S.P.Q. (BNA) 618 (Bd. Pat. App. & Inter. 1950)	20
<i>Graham v. John Deere</i> , 383 U.S. 1, 17-18 (1966).....	24
<i>Helmsderfer v. Bobrick Washroom Equip.</i> , 527 F.3d 1379, 1383, 87 U.S.P.Q. 2d (BNA) 1216 (Fed. Cir. 2008).....	27
<i>In re Ackerman</i> , 444 F.2d 1172, 170 USPQ 340 (CCPA 1971).....	24
<i>In re Brown</i> , 329 F.2d 1006, 141 USPQ 245 (CCPA 1964).....	25
<i>In re Donohue</i> , 766 F.2d 531, 533, 226 U.S.P.Q. 619 (Fed. Cir. 1985)	24
<i>In re Epstein</i> , 32 F.3d 1559, 1568, 31 U.S.P.Q.2d (BNA) 1817 (Fed. Cir. 1994)	25
<i>In re Herr</i> , 377 F.2d 610, 153 USPQ 548 (CCPA 1967).....	24
<i>In re Payne</i> , 606 F.2d 303, 314-15, 203 USPQ 245 (CCPA 1979)	25
<i>In re Russell</i> , 439 F.2d 1228, 169 USPQ 426 (CCPA 1971)	24
<i>In re Stempel</i> , 241 F.2d 755 , 759-60, 113 USPQ 77, 81 (CCPA 1957).....	21, 23, 24
<i>In re Tanczyn</i> , 347 F.2d 830, 833, 146 USPQ 298, 301 (CCPA 1965).	21
<i>King Instrument v. Otari Corp.</i> , 767 F.2d 853, 861, 226 U.S.P.Q. 402 (Fed. Cir. 1985) <i>cert. denied</i> 475 U.S. 1016 (1986).....	23
<i>KSR International Co. v. Teleflex, Inc.</i> , 550 U.S., 127 S. Ct. 1727; 167 L. Ed. 2d 705; 82 U.S.P.Q.2D (Apr. 30, 2007).....	24
<i>Mahukar v. C.R. Bard, Inc.</i> , 79 F.3d 1572, 1578, 38 U.S.P.Q.2D 1288 (Fed. Cir. 1996)	23
<i>Vitronics Corp. v. Conceptronic, Inc.</i> , 90 F.3d 1576, 1583 (Fed. Cir. 1996)	27

Other Authorities

1 Chisum on Patents § 3.04 [1][b][v] to [1][c].....	25
MPEP § 706.03(w)	24
MPEP § 715.04	22
MPEP §§ 2011-2011.01	27

I. Real Party in Interest

The real party in interest is Open Invention Network, Inc., the assignee of record.

II. Related Appeals and Interferences

A prior appeal was decided in this case, Appeal No. 2006-1639, decided August 31, 2006. (R 2) Reconsideration was denied May 21, 2007. (R 22) A Petition for a second rehearing was dismissed as moot on September 17, 2007. (R 30) There are no other known appeals or interferences relating to this case.

III. Jurisdictional Statement

The Board has jurisdiction under 35 U.S.C. 134(a). The Examiner mailed a non-final rejection on October 9, 2008 (R 36), setting a three-month shortened statutory period for response. The time for responding to the rejection was set to expire on January 9, 2009. Rule 134. More than two office actions have been issued, so an appeal can be taken from a non-final office action. A notice of appeal was filed on December 9, 2008. The time for filing an appeal brief is two months after the filing of a notice of appeal. Bd.R. 41.37(c), which will expire on February 9, 2009. This brief is being filed on December 16, 2008.

IV. Status Of Claims

Claims 1-15 and 61-74 are pending in this case and all have been rejected.

IV-A. Status Of Amendments

No amendments have been filed subsequent to the most recent office action.

V. Summary of Claimed Subject Matter

There are three independent claims related to an interface for transactions and for a method for programming that applies the method. The claimed embodiments are useful for transactions among nodes in a network (FIG. 1, R 60) including a plurality of nodes that execute processes involved in the transactions (FIGS. 3, 7, 11, R 62, 66, 70) the interface being stored in a computer readable medium. For instance, a Web service in an electronic commerce network can use the interface described to compose, send and receive XML-formatted electronic commerce documents such as a purchase order

(FIG. 8, ref. 811) submitted to and a PO acknowledgement received from a PO-receiving web service.

The interface claimed is stored in memory accessible by at least one node in the network. It includes a machine-readable specification of an interface to transaction processes [claim 1] or operations [claim 73] (FIG. 2, R 61). The specification includes interpretation information providing a definition of an input document (refs. 211, 213-218), and a definition of an output document (refs 212, 219-224). The definitions of the input and output documents comprise respective descriptions of sets of storage units and logical structures for the sets of storage units, for instance, XML documents. (R 79-80)

Claim 15 is suggested as representative of the group that includes claim 1. It specifies a particular embodiment, wherein the definitions of the input and output documents use document type definitions (DTDs) compliant with a standard Extensible Markup Language XML. (FIG. 15, R 74; R 80)

Dependent claim 5 specifies that the machine readable specification be in a document that complies with a definition of an interface document, for instance, an XML document. (R 80, line 1) A sample embodiment, as an XML fragment, appears on page 45 of the Application. (R 120)

Dependent claim 7 further requires the machine readable specification to include a reference to a specification of a particular transaction, which the Application exemplifies as a pointer. (R 82, line 18)

Dependent claim 13 further includes a repository and specifies that at least one of the input and output documents be defined by reference to a document type stored in the repository. (R 82, line 18)

Dependent claim 14 requires that the repository include, in addition to the document type definitions in claim 13, a document type for identifying participant processes in the network. (R 84, line 12)

Dependent claim 16 requires that the machine readable specification of claim 1 qualify as an XML document, defined by a DTD. (R 120)

Another embodiment, independent claim 61, is a method for programming a commercial transaction in a network. This method includes defining a machine-readable definition of an input document (FIG. 2, R 61) for a node in the network (FIGS. 3, 7, 11,

R 62, 66, 70) including resources to execute a process in the transaction, and a machine-readable definition of an output document (FIG. 2) for the node. The definitions of the input and output documents include respective descriptions of sets of storage units and logical structures for the sets of storage units. The method includes providing interpretation information for the logical structures to the node.

Dependent claim 72 further requires of the method for programming, providing a parser that handles input document definitions and generates event signals and an event listener that responds to the event signals. (FIG. 5, refs. 500, 503, 504A, R 64)

VI. Issues/Rejections To Be Reviewed On Appeal

The issues are arranged by subject: removal of McKendrick's brief article as reference; why the claims are allowable over McKendrick and the XML 1.0 Recommendation; and overcoming the section 112 rejections of newly added claims 73-74.

Whether the Examiner erred in rejecting each of the pending claims 1-16 and 61-74 under 35 U.S.C. § 103(a) because the undisputed evidence establishes actual reduction to practice of the claimed technology before the September, 1998 publication of McKendrick's brief article?

Whether the Examiner erred in rejecting claims 1, 2, 4, 8-12, 15, 64, 73 & 74; 5-6 & 65; 7; 13; 14; 16; 61 & 66-71; and 72 under Section 103(a), because one of ordinary skill in the art, circa 1998, would not have found McKendrick's brief article in combination with the newly published XML 1.0 Recommendation to provide a written description or enabling disclosure of the claimed technology?

Whether the Examiner erred in rejecting claims 73-74 under Section 112, because "operations" are referred to in the original specification dozens of times and one of ordinary skill in the art, after reading the specification, would understand operations to have a very similar meaning to transaction processes?

VII. Grouping Of Claims

Due to the Board's decision on the first appeal, which suggested showing that each dependent claim (R 10) was reduced to practice before the critical date, the dependent claims are individually addressed. Only claims 1 & 73 and 2 & 74 grouped together for purposes of removing McKendrick as a reference.

In response to the Section 103 rejections, Applicants group the claims as: 1, 2, 4, 8-12, 15, 64, 73 & 74; 5-6 & 65; 7; 13; 14; 16; 61 & 66-71; and 72. Independent claims 1 and 73 are grouped together, along with various dependent claims. Independent claim 61 is grouped with various dependent claims. Six groups of dependent claims are argued separately, to give context to the independent claims and avoid any "broadest reasonable interpretation" that would be inconsistent with the specification or the dependent claims.

Applicants group claims 73-74 for response to the Section 112 rejections, because the Examiner rejected claim 74 solely on the basis that it depended from claim 73.

VIII. Argument

A. Statement of Facts

1. Introductory Statement Regarding the General Area of Technology

This application is 10 years old, as old as the use of XML for e-commerce. The Examiner, reviewing the evidence of record, concluded that the claimed technology was conceived of in 1997. (R 57) The industry organization W3C published the XML 1.0 "Recommendation" on February 10, 1998 (R 194), following committee work and draft recommendations. This application was filed on October 16, 1998. (R 59)

This technology relates to what has come to be called Web services. The claimed interface definition technology is particularly useful for the so called document-style interface to Web services.

In 1998, VEO's document-style interface rivaled Microsoft's remote procedure call or RPC interface for use in e-commerce. Over 5 –10 years, the document-style interface ended up dominating some segments of e-commerce. It took several years for standards to be formulated for document-style interface definitions and for use of document-style interfaces. It took longer for some of the major software vendors to abandon RPC as their default and preferred interface to e-commerce interactions.

Related to the claimed technology, but not subject to patent protection and dedicated to royalty-free public use, is a collection of business document forms called the "common business library", abbreviated CBL. (R 175). See, www.xCBL.org.

The claimed interface definition technology does not depend on CBL or necessarily even on XML. Conversely, the CBL documents can be used for e-

commerce processes that do not incorporate the claimed interface specifications. (Decls. § 10, R 389). CBL documents could be used by processes that use remote procedure call interfaces, instead of document-style interfaces.

2. Facts Related to the Application

Applicants filed three applications on October 16, 1998 that have overlapping specifications. Three patents have issued to this family, US Patent Nos. 6,542,912, 6,226,675, and 6,125,391. One of the three patents issued from a divisional of this application. This application and application number 09/173,854 remain pending.

The applications originally were assigned to a start up, VEO Systems, which merged with Commerce One. Commerce One had a very successful initial public offering, but faltered and filed for bankruptcy in 2004. JGR Acquisition, Inc. acquired substantially all of Commerce One's portfolio in a highly publicized bankruptcy auction. A little more than a year later, it assigned the portfolio to Open Invention Network, Inc., which is the current assignee and real party in interest. Open Invention Network gives away "free" licenses to this portfolio, on terms that support open software development in the Linux environment. The terms of the royalty-free license can be found on the website at www.openinventionnetwork.com/patents.php, (not of record).

The VEO Systems team was very active in teaching the user community about the document-style interface to Web services and promoting its adoption. Their evangelism included speaking at conferences on the emerging technology, writing papers and participating in industry committees.

3. Facts Related to the Prior Appeal

Most of the claims in this application were subject to a prior appeal and have not been amended since then. In response to new issues raised by the Board, Applicants submitted evidence during appeal, which the Board directed should be considered by the Examiner. This second appeal includes new declarations and new exhibits.

The first appeal was decided adversely to applicants on August 31, 2006. (R 2) The Board's rationale adopted neither the Examiner's reasons that were appealed nor the Examiner's arguments on appeal. Accordingly, Applicants filed request for reconsideration with responsive evidence. The Board's decision was again the adverse to Applicants. (R 22)

Applicants petitioned for a second reconsideration, in part asking that the Board expressly remand the case to the Examiner for consideration of new issues raised by the Board's decisions and the new evidence. The petition for a second reconsideration was denied by the Chief Administrative Judge as moot (R 30), due to filing of an RCE (R 233) at the same time as the petition.

4. Facts Related to General Errors in Examination

The facts in this section relate primarily to evidence that the Examiner did not dispute, criticize or comment on in any way.

Subsequent to the RCE, Applicants submitted five new declarations from inventors and a non-inventor (R 326-401), with hundreds of pages of exhibits. Among the corroborating exhibits are data structures, source code and memoranda. Proceeding with declarations by four out of five inventors was approved by the Office of Petitions. (R 323)

a. Undisputed Facts Regarding Actual Reduction to Practice of the Claimed Technology Before January 21, 1998, Eight Months Before Publication of McKendrick Reference.

In Section 19 of the new declarations, 5 1/2 pages of extensively corroborated testimony (R 395-400) establish actual reduction to practice of the claimed subject matter before January 21, 1998, months before McKendrick's brief article was published. This evidence is undisputed, as the Examiner's non-final office action mailed October 9, 2008 completely ignores section 19 of the declarations. (R 18-21) The Examiner does not criticize or dispute either the facts established in section 19 or the sufficiency of the corroborating documents.

Moreover, sections 13-16 of the declarations (R 390-394) establish actual reduction to practice of the claimed technology by reference to the imdesc.xml data structure. (R 392-393) It is undisputed that the imdesc.xml data structure (Exhibit G , R 578) embodies limitations of the claims. The Examiner's non-final office action October 9, 2008 completely ignores sections 13-16. (R 54-57) The data structure is dated January 2, 1998. (R 392) It was placed in memory, tested and proved to work for its intended purpose in advance of a customer demonstration scheduled for January 21, 1998. (R393)

The part of the imdesc.xml data structure that we quoted is only 23 lines long. (R 308, 578) It is short and elegant enough to be understood and logically tested by inspection.

b. Undisputed Facts Regarding Actual Reduction to Practice of the Claim Technology on or Before July 25, 1998, Two Months Before Publication the McKendrick Reference.

Applicants' declaration testimony (R 393-394) proves a public demonstration of interface definition technology at a conference on July 25, 1998. The data structure depicted in Exhibit I, slide 30 (R 678, 394) embodies limitations of the claims. The data structure was publicly disclosed in the context of a larger technology presentation. It is undisputed that the next slide in the presentation, slide 31 (R 679) disclosed that "CBL v1.0" was in use before July 25, 1998, in demonstration applications including Project Seitai and GSA catalog interoperability. (See Decls. § 19, Claim 4, R 396)

The Examiner's non-final office action mailed October 9, 2008 refers to slide 30 as, "merely a PowerPoint document" (R 54), without any analysis of slide 30's evidentiary significance or the declaration testimony (R 393-394) that explains it. The Office Action ignores slide 31. The presentation evidence that the Examiner ignored proves actual reduction to practice, including testing. It is entirely credible that the inventors tested their data structure and used it in demonstration projects before Dr. Robert Glushko disclosed as much at the International Workshop on Component-based Electronic Commerce, Haas School of Business, University of California, Berkeley. It is noteworthy that Dr. Glushko's work and scholarly presentations were regarded well enough for him to join the faculty of the Fischer Center for Information Technology and Marketplace Transformation, Haas School of Business, after he left Commerce One.

The imdesc.xml data structure, dated January 2, 1998 (R 579), and the slide 30 data structure, disclosed July 25, 1998 (R 678), are substantially similar to the data structure disclosed on page 45 of this application. (R 120; see Decls. §§14-17, R 392; see, *also*, Response, R 305) One of ordinary skill in the art would conclude, after comparing the cited data structure versions, that the inventors had created an embodiment on January 2, 1998 of the technology disclosed their patent application 10 months later.

c. Undisputed Facts Regarding the Level of Ordinary Skill in the Art in September-October, 1998.

The Examiner made no factual findings regarding the level of ordinary skill in the art and did not respond to Applicants' position on the issue.

These inventors included lecturers and authors. Those of ordinary skill in the art looked to these inventors for technological leadership. The relevant timeframe is summer-fall, 1998, closely following publication of the XML 1.0 Recommendation in February 1998. (R 194) Some of the inventor's lectures from 1998 are exhibits. (Exhibits I & K, R 648, 686) Their subsequent writings (Exhibits B, M, O, V, R 411, 718, 739, 849), which were prepared for non-patent purposes, describe the course of their development efforts and their pioneering leadership in their field.

On September 1, 1998, the audience at a conference presentation by Dr. Glushko questioned whether XML was stable enough to be used with production software. (R 704) Dr. Glushko responded, "I sort of think XML is stable enough. ... XML is undergoing a lot of changes. There is a major effort coming down the road which is an XML schema language, which would let you describe more data typing and semantic information inside of the XML definition, and that will be really important for commerce. ... [O]ur little working group we just started has Microsoft, Sun and Netscape in it because they recognize that XML will fail unless they all get along at some basic level."

The only evidence of record regarding teaching the claimed technology to those of ordinary skill at any time in 1998 is evidence of the inventors' teachings. There is no evidence of record of a technical description with enabling details of the claimed technology during 1998 by anyone other than the team that included these inventors.

d. Undisputed Facts Regarding How One of Ordinary Skill in the Art Would Have Understood the McKendrick Reference in September, 1998.

It is undisputed that a Microsoft article dated April 3, 1998 contains the phrase that McKendrick quoted, in a section of the article entitled "Opportunities." (Exhibit Q, R 784) There is no other evidence of record regarding what McKendrick was reporting from Microsoft. The Examiner ignored Exhibit Q, which is projecting opportunities and does not include a written description or an enabling disclosure of the claimed technology.

The passage from McKendrick's brief article, on which the Examiner relies (R 39-40) for input and output documents, is only 53 words long. It reads, " 'Customer services are now migrating to Web sites from call centers and physical locations,' states a report from Microsoft Corp. 'And, because most of these business applications involve manipulation and transfer of data-such as purchase orders, invoices, customer information and appointments XML will allow a rich array of business applications to be implemented.' " (R 192) (underlining added).

There has not been any express consideration by the Examiner of how McKendrick's words would have been understood by one of ordinary skill in the art, in September, 1998 (R 36-58), despite Applicants' urging.

It is undisputed that Microsoft was advocating, at the time of McKendrick's article, that protocols be developed that would use XML for remote procedure calls. The evidence includes remarks at a conference in Europe in May, 1998 by a general manager of Microsoft (Exhibit R, R 791), a pair of articles from July, 1998 reporting on Microsoft's XML-related activities (Exhibits S-T, R 802, 809) and a patent. (Exhibit U, R 812) The patent issued from an application filed on March 23, 1999, by a Microsoft partner that was working on XML-RPC.

There is no evidence of record to suggest that those of ordinary skill in the art, familiar with Microsoft's teachings about XML-RPC in 1998-99, would have understood McKendrick's brief discussion of Microsoft's activity to describe or enable practice of the claimed interface definition technology.

Both the imdesc.xml data structure (R 578) and the slide 30 data structure (R 677) provide and are accompanied by much more written description and enabling disclosure of the claimed technology than McKendrick's 53 words. (R 193)

e. Undisputed Facts Regarding Actual Reduction to Practice of Subject Matter in Individual Claims.

Applicants understand the Board's prior decision to suggest a claim-by-claim statement of facts regarding actual reduction to practice. (R 10). The facts that follow are taken from Section 19 of the declarations (R 395-400), with references to the Record added. These facts are undisputed because the Examiner ignored them.

"Claim 1: In Exhibits G-I, both imdesc.xml (R 578, Slide 30, R 678) depict machine readable interface specifications. The imdesc.xml file typically is found in a file

directory on a machine readable storage media. The PowerPoint Slide 30 appears to have been taken from a computer file similar to imdesc.xml and pasted into the presentation. The archive for imdesc.xml and the PowerPoint presentation both were stored on machine readable storage media. Both data structures define an interface to a transaction process. The imdesc.xml defines an interface with several service “functions”. Slide 30 defines multiple service “operations”. In imdesc.xml, one of the input documents is an “order”; in Slide 30, there is a “po”, which is short for purchase order. In both transaction interface definitions, an acknowledgement is sent, an “ack” in the earlier version and a “poack” in the later version. The input document definitions are referenced by “order.dtd”, “invoiceo.dtd”, “paynoteo.dtd”, “po.dtd” and “request.track.dtd”, which are data type definition (dtd) files. The output document definitions are referenced by “ack.dtd”, “poack.dtd” and “response.track.dtd”. The January 1998 demonstration scenario (Ex. F, R 390-391, 570) makes it clear that these interface definitions were published to nodes on a network that might desire to invoke the functions for which interfaces were defined. The context of the slides and other remarks by Glushko, including ongoing demonstration projects, make it clear that this interface was hosted and accessible to a plurality of nodes on a network in the development environment from which it was borrowed for the PowerPoint presentation.

“Claim 2: The data type specifications in the exemplary “order.dtd” (Exhibit E, R 476) include at least one logical structure. Similarly, slides 25-29 (Exhibit I, R 683-677) depict using logical structure building blocks to construct documents such as a purchase order (po.dtd). In general, a data type definition file (dtd) will include data type specifications for at least on logical data structure.

“Claim 3: The data type specifications for the country field of the exemplary “order.dtd” (Exhibit E, R 476) include at least one data structure mapping predefined sets of storage units for a particular logical structure in the definitions to respective entries in a list. The country code field is supported by a list in “codes.mod” (the codes module), which is incorporated into addresso.mod which, in turn, is part of order.dtd. With a bit of tracing from imdesc.xml, one can see where the reusable lists were part of the system. Use of country codes in addresses is a feature of CBL that extended the XML recommendation –the XML recommendation uses codes for language identification and not for addresses. See, W3C Recommendation, Extensible Markup

Language (XML) 1.0, § 2.12 (Feb. 10, 1998) (R 206) accessed at <http://www.w3.org/TR/1998/REC-xml-19980210#dt-app>. Turning to the July 25, 1998 presentation, slides 27-28 (R 675-676) similarly illustrate use of country codes in a purchase order, defined by the file “po.dtd”.

“Claim 4: In Exhibit D (R 428), the ENTITY “command” and the related ELEMENTs support registering definitions of documents and services in a repository in memory accessible to at least one node. The definitions of documents and services include logical structures and interpretation information for logical structures. In Exhibit I, Slide 23 (R 671) depicts a service registration document in a registry accessible to discovery nodes on a network. Slide 31 (R 678) indicates that CBL was already in use for demonstration applications, Project Seitai and GSA catalog interoperability. We found it very useful to post our interface definitions for programmers to rely on during development, such as the imdesc.xml interface definition.

“Claim 5: Looking through files from the ingram/01 directory, which are reproduced in Exhibit H (R 581), one finds the data type definition corresponding to the sample interface definition imdesc.xml. Beginning with imdesc.xml on page 32 of 66 (R 613), one sees reference to “imarkdsc.dtd” in the DOCTYPE statement of line six. This data type definition appears on page 29 of 66 (R 610), and incorporates by reference the “isrvprim.mod” module that appears on page 54 of 66. (R 635) The isrvprim.mod defines elements of imdesc.xml, including service.name, service.location.pointer, and service.function. Thus, the sample “imdesc.xml” machine readable specification of Exhibit G (R 578) complies with the imarkdsc.dtd definition of an interface document including logical structures for storing identifiers (e.g., service.name and/or input doctype) and references to definitions (dtd’s) of input and output documents. Similarly, in Exhibit I, slide 30 (R 678), identifiers of particular transactions appear as “Submit Order” and “Track Order.” The references to definitions of the input and output documents are dtd file names. The “Loose Coupling” via Shared Document Definitions slide 22 (R 670) makes it clear that the definition in slide 30 is a document that complies with a dtd, as in the ingram/01 files.

“Claim 6: Both the “imdesc.xml” Exhibit G (R 578) and the Slide 30 in Exhibit I (R 678) specify one or more transactions supported by the interface.

“Claim 7: Both the “imdesc.xml” Exhibit G and the Slide 30 in Exhibit I include references to documents used in the particular transactions, specifying the document dtd’s by name instead of providing a copy of them.

“Claims 8-12: The input and output documents in both versions are depicted as XML documents. Generally, XML documents compliant with the February 1998 recommendation can be parsed or unparsed data. XML documents may encode text characters and the text characters may provide a natural language word. XML documents generally include markup data to identify sets of storage units.

“Claim 13: The files reprinted in Exhibits D, E and H from directories 072, 075 and ingram/01 (R 428, 476, 581) store document types that can be used in a plurality of transactions. Commands identified above were used to register these document types in a repository. Slides 25-29 (R 673-677) depict a library of document types stored in a repository. The dtd definitions for the documents used in the transactions are referenced by names. For instance, in “imdesc.xml” we see the “ack.dtd” as the output document for several service functions.

“Claim 14: The collections of files from directories include “imarkprt.dtd” and “imarkdsc.dtd” for market participant information and market description information. These modules are called out in Slide 28 of Exhibit I (R 676) by slightly different and more easily readable names, “markpart.dtd” and “markdesc.dtd”. Some of these document types include identifications of participant processes.

“Claim 15: The dtd files referenced in “imdesc.xml” (R 578) and Slide 30 (R 678), e.g., order.dtd and ack.dtd, are recognizable as compliant with a standard Extensible Markup Language XML.

“Claim 16: The file “imdesc.xml” and the code excerpt in Slide 30 are recognizable as compliant with a standard Extensible Markup Language XML.

“Claim 61: In the course of creating “imdesc.xml” and Slide 30, the authors of those documents went through the process of defining a machine readable interface definition including an input and output document. The versions of the transaction interface definition data structure were provided to network nodes that requested the definition data structures.

“Claim 62: The data type specifications in the exemplary “order.dtd” include at least one logical structure. Similarly, slides 25-29 (R 673-677) depict using logical

structure building blocks to construct documents such as a purchase order (po.dtd). In general, a data type definition file (dtd) will include data type specifications for at least one logical data structure.

“Claim 63: The data type specifications for the country field of the exemplary “order.dtd” (Exhibit E, R 476) include at least one data structure mapping predefined sets of storage units for a particular logical structure in the definitions to respective entries in a list. The country code field is supported by a list in “codes.mod” (the codes module), which is incorporated into addresso.mod which, in turn, is part of order.dtd. With a bit of tracing from imdesc.xml, one can see where the reusable lists were part of the system. Use of country codes in addresses is a feature of CBL that extended the XML recommendation –the XML recommendation uses codes for language identification and not for addresses. See, W3C Recommendation, Extensible Markup Language (XML) 1.0, § 2.12 (Feb. 10, 1998) (R 206) accessed at <http://www.w3.org/TR/1998/REC-xml-19980210#dt-app>. Turning to the July 25, 1998 presentation, slides 27-28 (R 675-676) similarly illustrate use of country codes in a purchase order, defined by the file “po.dtd”.

“Claim 64: Slide 23 (Exhibit I, R 671) depicts a service registration document in a registry accessible to discovery nodes on a network. Slide 31 (R 679) indicates that CBL was already in use for demonstration applications, Project Seitai and GSA catalog interoperability. We found it very useful to post our interface definitions for programmers to rely on during development, such as the imdesc.xml interface definition. In the January 1998 and earlier materials (Exhibits. D, E and H, R 428, 476, 581), we have printed some libraries of logical structures that we were using then. The Slides indicate that the libraries of logical structures were still in use six months later, when the conference presentation was made in July 1998.

“Claim 65: Looking through files from the ingram/01 directory (Exhibit H, R 581) one finds how imdesc.xml has been defined. Beginning with imdesc.xml on page 32 of 66 (R 613), one sees reference to “imarkdsc.dtd” in the DOCTYPE statement of line six. This data type definition appears on page 29 of 66 (R 635), and incorporates by reference the “isrvprim.mod” module that appears on page 54 of 66. The isrvprim.mod defines elements of imdesc.xml, including service.name, service.location.pointer, and service.function. Thus, the sample “imdesc.xml” machine readable specification of

Exhibit G (R 578) complies with the imarkdsc.dtd definition of an interface document including logical structures for storing identifiers (e.g., service.name and/or input doctype) and references to definitions (dtd's) of input and output documents. Similarly, in Exhibit I, slide 30 (R 678), identifiers of particular transactions appear as "Submit Order" and "Track Order." The references to definitions of the input and output documents are dtd file names. The "Loose Coupling" via Shared Document Definitions slide 22 (R 670) makes it clear that the definition in slide 30 is a document that complies with a dtd, as in the ingram/01 files.

"Claims 66-70: The input and output documents in both versions (code and presentation) are depicted as XML documents. Generally, XML documents compliant with the February 1998 recommendation can be parsed or unparsed data. XML documents may encode text characters and the text characters may provide a natural language word. XML documents generally include markup data to identify sets of storage units.

"Claim 71: The dtd files referenced in "imdesc.xml" (R 578) and Slide 30 (R 678) are recognizable as compliant with a standard Extensible Markup Language XML.

"Claim 72: Our development work in 1997-98 included applying parsers to input documents, generating one or more Java event signals in response to the logical structure of the input documents, and having event listener programs respond to the event signals."

5. Facts Regarding Limitations in Individual Claims for Which McKendrick Provides No Written Description or Enabling Disclosure.

Claim 1: McKendrick's 53 words (R 192) do not give a written description or enabling disclosure of "providing a machine readable specification providing a definition of an interface to transaction processes stored in memory, accessible by at least one node in the network, including providing a definition of an input document, and a definition of an output document," because the manner in which "XML will allow [processes involving purchase orders and invoices] ... to be implemented" is not described by McKendrick.

The interface definition technology of claim 1 is exemplified by (but not limited to) three program code embodiments, the January 2, 1998 Exhibit G; the July 25, 1998

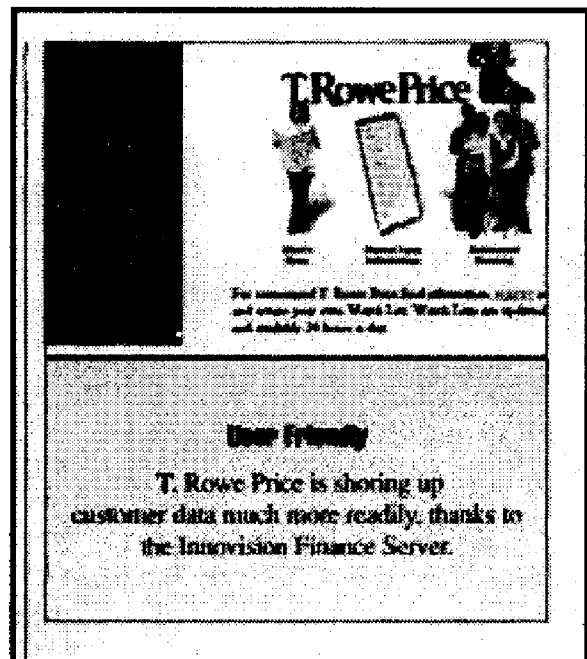
slide 30, Exhibit I (R 678), and the Application page 45 (R 120) example. (See Decs. §§ 14-17, R 392-394)

Applicants' provided multiple working examples of interface definition technology. In contrast, McKendrick (R 192) refers to purchase orders and invoices in the future tense, referring to business processes that XML "will allow ... to be implemented."

While purchase orders and invoices could be inputs and outputs to some future system that McKendrick expected to be developed, it is not inherent in using XML that a purchase order would be processed through a document-style interface, as opposed to an RPC interface. One using the XML-RPC recommended by Microsoft in 1998 for purchase orders and invoices, with the binding behaviors described in Merrick et al., US 7,028,312, XML Remote Procedure Call (XML-RPC), cols. 22-23, (R 838-839), would have no need to use the claimed interface definition technology.

Using XML documents does not inherently involve "providing a definition of an interface to transaction processes stored in memory, accessible by at least one node in the network, including providing a definition of an input document, and a definition of an output document." Documents written in XML could be used for transactions without the particular claimed definition of an interface. For instance, a buyer could send an XML document purchase order and a DTD file for the purchase order by e-mail to a supplier, without relying on the claimed interface definition technology.

McKendrick includes an illustration of a web page (R 192), as set out in the margin, on which the Examiner has not relied. If this is considered a web site *interface*, as the Board has suggested (R 27), then one of ordinary skill in the art would understand that this interface does NOT to include "providing a definition of an interface to transaction processes stored in memory, accessible by at least one node in the network, including providing a definition of an input document, and a definition of an output document." The illustration appears



to be a static HTML page that is accessed without an input document and that serves an HTML page without an output document or any interface definition. All that accessing a web page required in 1998 was an HTML-enabled browser -- that was the beauty of HTML. The illustration does not provide a written description or enabling disclosure of whatever technology was used to create it.

Claim 5: The Examiner has acknowledged (R 43) that neither McKendrick nor a combination with the XML 1.0 Recommendation teaches extending the machine readable specification to include “a document compliant with a definition of an interface document including logical structures for storing an identifier of a particular transaction, and at least one of definitions and references to definitions of input and output documents for the particular transaction.”

Claim 6: Page 13 of the XML 1.0 Recommendation (R 207), on which the Examiner relies (R 43), does not teach using “a document compliant with a definition of an interface document logical structures for storing an identifier of the interface, and for storing at least one of specifications and references to specifications of a set of one or more transactions supported by the interface,” because page 13 does not provide an interface document type or a definition of an interface document. The XML 1.0 Recommendation does not teach the claimed interface documents type because it is a language definition, not an application of the language to building interfaces for e-commerce.

Claim 7: The Examiner has acknowledged (R 43-44) that neither McKendrick nor the XML 1.0 Recommendation teaches an implementation of the claimed machine readable specification by “references”, as including “a reference to a specification of a particular transaction, and the specification of the particular transaction includes a document including logical structures for storing at least one of definitions and references to definitions of input and output documents for the particular transaction.”

One of skill in the art, after reading this specification, would understand a “reference to a specification”, which is used in the claims as an alternative to the specification itself. The Application exemplifies a “reference” as a pointer that is followed in order to reach the specification. (R 82, line 18)

Claim 13: The Examiner has acknowledged (R 47) that neither McKendrick nor a combination with the XML 1.0 Recommendation teaches an implementation “including a

repository stored in memory accessible by at least one node in the network of document types for use in a plurality of transactions, and wherein the definition of one of the input and output documents includes a reference to a document type in the repository.”

What the Examiner claims to have been “well known” (R 47) is a data dictionary for a database or programming system. Well-known data dictionaries, circa 1998, did not include the claimed transaction specifications including definitions of input or output documents.

Claim 14: Page 9 of the XML 1.0 Recommendation (R 203), on which the Examiner relies (R 46-47), does not teach extending a repository implementation, “wherein the repository of document types [further] includes a document type for identifying participant processes in the network,” because page 9 does not provide a participant identifier document type or a definition of a participant identifier document. The XML 1.0 Recommendation it is a language definition, not an application of the language.

Claim 16: Page 9 of the XML 1.0 Recommendation (R 203), on which the Examiner relies (R 51), does not teach requiring the machine readable specification to be “a document organized according to a document type definition compliant with a standard Extensible Markup Language XML,” because page 9 does not teach using XML for an interface specification document that, in turn, refers to definitions of XML documents to be used as input and output documents. The XML 1.0 Recommendation does not include these multiple levels of interface definition structure because it is just a language definition.

Claim 61: This claim is for a method for programming a commercial transaction in a network that applies the interface definition technology of claim 1. Reading the claim, one sees that the input and output documents are defined and provided to a node being programmed, which includes resources to execute a process in the transaction. In dependent claim 72, the programming method further includes providing a parser responsive to the input document definition and providing event listeners responsive to the event signals generated by the parser.

None of the Examiner’s analysis of claim 61 (R 48-50), takes into account that claim 61 is a method for programming a commercial transaction.

The Examiner has acknowledged (R 48-49) that McKendrick does not explicitly disclose any of the claimed limitations. That is, McKendrick does not explicitly disclose a method for programming a commercial transaction in a network, comprising: “defining a machine readable definition of an input document for a node in the network including resources to execute a process in the transaction, and a machine readable definition of an output document for the node, the definitions of the input and output documents comprising respective descriptions of sets of storage units and logical structures for the sets of storage units; and providing interpretation information for the logical structures to the node.”

The Examiner cited no evidence to support the Examiner’s inherency contention (R 49) that, “Since the purchase orders as well as the invoices [in McKendrick], which are [considered by the Examiner to be] the input and output documents, are in XML format, they definitely include information to provide the definition for said documents according to the XML structures.” This inherency contention is contradicted by the mechanism provided in the XML 1.0 Recommendation, § 2.8 (R 202-204), for defining constraints on the logical structure of an XML document and to support the use of predefined storage units is an XML document type declaration. An XML document type definition contains or points to markup declarations for a class of documents and appears in the code near the beginning of the XML document itself. The example given in the Recommendation illustrates (R 204) an embedded DOCTYPE “greeting” (between []) that defines the ELEMENT of the greeting, without any external interface or document definition:

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE greeting [
  <!ELEMENT greeting (#PCDATA)>
]>
<greeting>Hello, world!</greeting>
```

Therefore, use of XML for purchase orders and invoices does not inherently include the claimed interface definition technology.

The Examiner cited no evidence to support the Examiner’s contention (R 50) that, “McKendrick discloses the transaction documents such as the purchase orders and the invoices in XML format for a business transaction over the Internet where a

user can search and buy an item on-line.” There is no evidence of record that Microsoft’s browser was XML-enabled in September 1998. It was not until November 4, 1998, that Microsoft announced the availability of a beta version of Microsoft Internet Explorer 5 for technical evaluation. See <http://xml.coverpages.org/xmlMicrosoft.html> (not of record).

Using a browser on-line to search for and buy goods as the Examiner describes (R 50), has nothing to do with claim 61, because on-line browsing does not describe a method of programming a commercial transaction in a network.

Claims 62-71: No separate facts are provided for these claims, as they modify claim 61 in terms similar to claims 2-6, 8-12 and 15, which depend from claim 1. Moreover, the Examiner made a “same rationale” rejection of these claims. (R 50)

Claim 72: The Examiner has acknowledged (R 50) that neither McKendrick nor a combination with the XML 1.0 Recommendation teaches extending a method for programming by “providing a parser to generate event signals in response to logical structures in the definition of the input document; and providing event listener programs which respond to the event signals to execute the process.”

One useful application of the claimed method for programming is implementation of a “marshaling program” to convert an input document into an internal representation that the transaction processing program uses. (Application, R 164) The Examiner’s analysis is unresponsive to using the claimed method for programming. (R 50-51)

The Examiner cited no evidence to support the Examiner’s modification of the cited references (R 51): “It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have modified McKindrick [sic] to include ‘providing a parser to generate event signals in response to logical structures..’ and ‘providing event listener program which respond to the event signals to execute the process’ for the following reason.” Neither a reference nor official notice is cited as a source of the elements that the Examiner acknowledges are missing.

Claims 73-74: These claims differ from claims 1-2 in that the claimed interface is “to an operation”, instead of “to transaction processes”.

The Application teaches an interface to operations in many places, including pages 17, 25-27, 30, 66, 70-79, and 88. (R 92, 100-102, 105, 141, 145-154, 163) In Figure 2 (R 61), reference 210 is referred to as an operation performed by a service.

(See, Applic., at 17, R 92) The sample code in the application typically uses the nomenclature, "Service Operations". (R 100-102, 105, 141, 145-154, 163)

Separate facts for claims 73-74 are not needed, because of how closely claims 73-74 resemble claims 1-2.

B. The Examiner Erred in Rejecting Each of the Pending Claims 1-16 and 61-74 Under 35 U.S.C. § 103(a) Because the Undisputed Evidence Establishes Actual Reduction to Practice of the Claimed Technology Before the September, 1998 Publication of McKendrick's Brief Article.

Rejection of the claims is improper because it depends on McKendrick, which has been effectively removed as a reference. On its face, the inventors' and non-inventor's testimony swears behind the McKendrick reference, as the inventors actually reduced the claimed technology to practice and tested it sufficiently to understand that it would work for its intended purpose before McKendrick's brief article published in September, 1998.

1. The Examiner Erred in Rejecting Claims 1-16 and 61-74 Because the Undisputed Evidence of Record Proves Actual Reduction to Practice Before January 21, 1998, in Preparation for a Scheduled Demonstration to a Prospective Customer.

The Examiner erred in the Office Action of October 9, 2008, by failing to give any evidentiary weight to sections 13-16 and 19 (R 390-400) of the declarations and the supporting exhibits (R 402-685), which provide well-corroborated testimony of an actual reduction to practice before January 21, 1998.

Failure to give any consideration to sworn testimony is reversible error. *Ex parte Ovshinsky*, 10 U.S.P.Q.2d (BNA) 1075 (Bd. Pat. App. & Inter. 1989). In that case, the Board held, "This failure to give probative weight to the Rule 131 declarations constitutes reversible error. ... [I]t is entirely appropriate for appellant to rely on a showing of facts set forth in the Rule 131 declarations themselves to establish conception of the invention prior to the effective date of the reference. This appellants have done." The *Ex parte Ovshinsky* decision cites *Ex parte Swaney and Banes*, 89 U.S.P.Q. (BNA) 618 (Bd. Pat. App. & Inter. 1950), another case in which the Board reversed the examiner and held that the declarations offered were sufficient, even without written corroboration of all the elements of the claims.

This Examiner failed to give any weight to sections 13-16 and 19 of the declarations or to the supporting exhibits – she ignored the evidence. (R 54-57) The

declarations are detailed, highly credible, and thoroughly corroborated by specific reference to many documents as set forth in the Statement of Facts. It is reversible error to ignore facts set forth in the Rule 131 declarations.

In the first appeal, the Board instructed that it is Applicants' burden, regardless of the Examiner's analysis, to clearly explain how the proffered evidence shows completion of the invention. (R 8) To shoulder this burden, Applicants presented facts in detailed declarations (Decls. §§ 6-20, R 388-400), corroborated by many exhibits and explained by extensive briefings. (R 293-322) On appeal, our Statement of Facts is presented on a claim-by-claim basis.

Earlier in the case, the Board recited the following standard for judging Rule 131 declarations: Applicants must "show prior 'possession of either the whole invention claimed or something falling within the claim, in the sense that the claim as a whole reads on it.' See *In re Tanczyn*, 347 F.2d 830, 833, 146 USPQ 298, 301 (CCPA 1965). Applicants can show 'priority with respect to so much of the claimed invention as the reference happens to show.' See *In re Stempel*, 241 F.2d 755, 759-60, 113 USPQ 77, 81 (CCPA 1957)." (R 24)

The reference that sets the standard for "showing so much as the references happens to show" is McKendrick's brief article. McKendrick sets a low hurdle because what it says in the 53 words (R 192) on which the Examiner relies, is essentially that XML provides an opportunity for developing applications in the future that could handle purchase orders and invoices.

Applicants have carried their burden, regardless of whether the detailed declarations and corroborating exhibits are judged against McKendrick or against the claims. Our showing is overwhelming, when compared to McKendrick. Moreover, the declarations and exhibits have been carefully mapped to the claims. The evidence is detailed, persuasive and not criticized in the record. Against any standard, Applicants have carried their burden.

The facts in *Ex parte Ovshinsky* are on all fours with this case, because that examiner made the same mistake as this one: Both refused to give any evidentiary weight to declaration testimony or to the exhibits. The Board reversed that Examiner and should reverse this one as well.

2. The Examiner Erred in Rejecting Claims 1-16 and 61-74 Because the Undisputed Evidence of Record Proves Actual Reduction to Practice on or before July 25, 1998, When Dr. Glushko Described Actual Use of the Claimed Technology at the International Workshop on Component-Based Electronic Commerce, Haas School of Business, University of California, Berkeley

The Examiner erred in the Office Action of October 9, 2008, because she ignored sections 14-17 of the declarations (R 392-394) and gave no weight to Exhibit I, slide 30 (R 678), which provide well-corroborated testimony of an actual reduction to practice on or before July 25, 1998.

Again, failure to give any consideration to inventors' sworn testimony is reversible error. *Ex parte Ovshinsky, supra*. Inventors' declarations under Rule 131 are not the only kind of evidence that the Examiner is required to consider. The Rules (e.g., current Rule 131 and predecessor Rule 75) describe a safe harbor for showing actual reduction to practice prior to the date of a reference, but the rules do not and cannot limit the statute (§ 102) or limit the alternative ways of proving actual reduction to practice. *Ex Parte Foster*, 105 O.G. 261 (Comm'r Pat. 1903) (accepting non-inventor declaration); MPEP § 715.04 (citing *Ex Parte Foster* as good authority, 105 years later).

We presented proof of reduction to practice on or before July 25, 1998 in two rounds of briefing. (R 315-317, 240-250) The Examiner erred in giving no probative weight to Exhibit I, slide 30, because she only criticized slide 30 in isolation. (R 53) The Examiner erred by ignoring the context set in the inventors' testimony (Decls. §§ 14-17) and ignoring other slides in the same presentation that show, *inter alia*, that Dr. Glushko was demonstrating technology already used successfully in two trials: Project Seitai and GSA catalog interoperability. (Exhibit I, slide 31, R 679; Decls. § 19, Claim 4, R 396) The Examiner further erred in failing to consider the similarities among the imdesc.xml data structure, dated January 2, 1998 (Exhibit G, R 578), the slide 30 data structure, disclosed July 25, 1998 (Exhibit I, R 678), and the data structure disclosed on page 45 of this Application. (Application, R 120; Briefing, R 310) These similarities demonstrate that the January 2, 1998 embodiment was ready to work for its intended purpose.

Applying the *In re Stempel* rule set forth above, our position is that slide 30, in the context of the July 25, 1998 presentation and as explained in the declarations, proves much more than McKendrick. Accordingly, Applicants have met the general burden to

remove McKendrick's brief article as a reference. *In re Stempel, supra*, 241 F.2d at 759-60.

3. The Examiner Erred in Rejecting the Claims Based on McKendrick's Brief Article Because the Undisputed Evidence Regarding Each of the Claims 1-16 and 61-74 Removes McKendrick as a Reference.

The Statement of Facts addresses reduction to practice on a claim-by-claim basis that is not repeated here. For each claim, the Statement recites undisputed, well-corroborated testimony that shows actual reduction to practice before September 1998.

The Examiner erred in applying the wrong standard to judging how much evidence Applicants need to provide. (R 287 at bottom, 54, 56-57) The Examiner's requirement that Applicants need "evidence of a complete product that is guaranteed that it worked with testing" (R 287), misstates the applicable rule of law. Applicants need not have completed a commercial product and need not have guaranteed that it worked based on extensive testing. "[I]n order for there to be a reduction to practice, there is no requirement that the invention when tested be in a commercially satisfactory stage of development." *King Instrument v. Otari Corp.*, 767 F.2d 853, 861, 226 U.S.P.Q. 402 (Fed. Cir. 1985) *cert. denied* 475 U.S. 1016 (1986). "Some devices are so simple and their purpose and efficacy so obvious that their complete construction is sufficient to demonstrate their workability." *Mahukar v. C.R. Bard, Inc.*, 79 F.3d 1572, 1578, 38 U.S.P.Q.2D 1288 (Fed. Cir. 1996) (*citing King Instrument*).

A demonstration prototype is enough to prove that this invention would work for its intended purpose. *See King Instrument, supra*. The prototype prepared for demonstration to Ingram Micro is enough. The witnesses have testified that they tested the prototype sufficiently to appreciate that it was workable; while preparation for the important demonstration to Ingram Micro involved substantial effort and testing.

Alternatively, there is no evidence of or argument that the elegant imdesc.xml data structure would have required any testing to show that it would work for its intended purpose. *See Mahukar, supra*. While we have not attempted to prove that VEO had a completed product in January 1998, we have proven that these inventors 1997 concept was tested before McKendrick was published and that the inventors correctly appreciated that the inventive data structure would work, which is enough to remove McKendrick as a reference when the correct legal standard is applied.

C. The Examiner Erred in Rejecting Each of the Pending Claims 1-16 and 61-74 under 35 U.S.C. § 103(a) Because the Undisputed Evidence Establishes That One of Ordinary Skill in the Art Would Not Find McKendrick's Brief Article in Combination With the XML v1.0 Recommendation to Provide a Written Description or Enabling Disclosure of the Claimed Interface Definition and Programming Technologies.

Even if McKendrick is not removed as a reference, the brief article in combination with the XML 1.0 Recommendation fails to provide a written description or enabling disclosure of what we claim, when the Board applies the same standard to McKendrick as to the Rule 131 declarations. *C.f., In re Stempel.*

1. The Examiner Erred in Failing to Evaluate the Level of Ordinary Skill in the Art, circa 1998, Based on the Evidence of Record.

It is fundamental that application of the Section 103 obviousness test includes considering the level of ordinary skill in the art. *KSR International Co. v. Teleflex, Inc.*, 550 U.S., 127 S. Ct. 1727; 167 L. Ed. 2d 705; 82 U.S.P.Q.2D (Apr. 30, 2007) and *Ex parte Jud*, Appeal No. 2006-1061, 2007 Pat. App. LEXIS 9, (BPAI Jan. 30, 2007) (expanded panel, informational opinion). This has been the case since *Graham v. John Deere*, 383 U.S. 1, 17-18 (1966), as we repeatedly have argued. (R 305, 258-260)

The Examiner erred when she refused to consider the substantial evidence that we submitted regarding the level of skill in the art, circa 1998, on the basis of *res judicata*. (R 54-55). It is black letter law that an examiner must not apply *res judicata* when new evidence is submitted after appeal. *In re Donohue*, 766 F.2d 531, 533, 226 U.S.P.Q. 619 (Fed. Cir. 1985); *In re Herr*, 377 F.2d 610, 153 USPQ 548 (CCPA 1967); *In re Russell*, 439 F.2d 1228, 169 USPQ 426 (CCPA 1971); and *In re Ackermann*, 444 F.2d 1172, 170 USPQ 340 (CCPA 1971). The Office's instructions to examiners are consistent with the case law, as MPEP § 706.03(w) reports that new evidence was not subject to *res judicata* and that rejections on that basis were reversed in the cases *In re Donohue*, *In re Herr*, *In re Russell* and *In re Ackerman*. We cited this authority and reminded the Examiner that the Board expressly invited us to submit our new evidence to the Examiner. (R 314-315) The Examiner's response (R 18-21) ignored the cases and Board's invitation. Refusal to follow the law is reversible error.

2. The Examiner Erred Failing to Reevaluate McKendrick's Brief Article in View of the Level of Ordinary Skill in the Art, circa 1998, and in View of Evidence Regarding the Microsoft Initiatives That McKendrick Was Reporting.

The level of skill in the art reflected in Exhibits A, B, K, and M-U belies the Examiner's interpretation of McKendrick. The combined effect of this evidence is to demonstrate that the level of ordinary skill in the art was very low in 1998, in the months immediately following W3C's publication of the XML 1.0 Recommendation, and that Microsoft was advocating development of XML-RPC technology for application of XML to commercial transactions. Microsoft's XML-RPC technology could readily be practiced without using VEO's claimed technology.

It is black letter law that references relied upon for a section 103 rejection must provide an enabling disclosure, *i.e.*, they must place the claimed invention in the possession of the public. 1 Chisum on Patents § 3.04 [1][b][v] to [1][c]. Printed publications cited as prior art must be enabling. *In re Epstein*, 32 F.3d 1559, 1568, 31 U.S.P.Q.2d (BNA) 1817 (Fed. Cir. 1994); Chisum, *supra*, citing, *In re Brown*, 329 F.2d 1006, 141 USPQ 245 (CCPA 1964); *In re Payne*, 606 F.2d 303, 314-15, 203 USPQ 245 (CCPA 1979).

The Statement of Facts recites the low level of skill in the art in September 1998, when these inventors were keynoting major conferences and responding to questions from attendees of ordinary skill in the art. Recall that on September 1, 1988, the audience asked Dr. Glushko whether XML was "stable, politically and otherwise", to which the inventor responded somewhat equivocally. In 1998, the level of ordinary skill was represented by the skeptical audience, not by the keynote speaker who was unveiling new technology.

The Statement of Facts shows that one of ordinary skill in the art would have found Microsoft advocating development and future use of XML-RPC, upon following up on McKendrick's brief article. The evidence of record ties Microsoft to XML-RPC. There is no evidence of record that Microsoft was using or advocating the claimed interface definition and programming technology.

Therefore, no one of ordinary skill in the art, reading McKendrick's brief article in 1998, would have considered the article to be an enabling disclosure or proof that the reporter was in possession of the claimed technology. Those of ordinary skill in the art,

comparing our application on October 16, 1998 to McKendrick's brief article a few weeks earlier, could not have considered McKendrick to have been in possession of what these inventors disclosed and claimed.

When McKendrick's brief article is considered in light of evidence regarding the level of ordinary skill in 1998, we see why McKendrick was writing about what would happen in the future, how "XML will allow companies to cooperate on product design and development", how "XML will allow a rich array of business applications to be implemented", instead giving a written description of something that already existed. In 1998, McKendrick says at pages 1-2, that use of XML was primarily buzz and potential, not working products.

In view of the new evidence regarding the level of skill in the art that the Examiner did not consider, we ask that the Board reverse the Examiner's expansive reading of McKendrick and the rejections based on that brief article.

3. The Examiner Erred in Rejecting the Claims (Grouped as 1, 2, 4, 8-12, 15, 73 & 74; 5-6 & 65; 7; 13; 14; 16; 61; 6, 66-71; and 72) Under Section 103(a) Because the References Cited Fail to Provide a Written Description or Enabling Disclosure of the Claimed Technology.

Applicants argued before and after appeal that McKendrick's brief article does not provide a written description or enabling disclosure of any of the technology found in the specification, drawings and claims. Our focus in the past has been on limitations found in the independent claims, limitations related to XML as an implementation of the claimed interface definition technology, and the role of repositories in making available the claimed interface definitions. The limitations previously discussed in detail can be found in claims 1, 2, 4, 13, 14, 15, 16, 61, 62, 64, 71, 73 and 74.

This paper presents a more detailed analysis of how the limitations in individual claims are missing from McKendrick and from the combinations on which the Section 103 rejections based. It would have been futile to present this detailed analysis to the Examiner, as the Examiner took the mistaken position that *res judicata* prevented her from considering any arguments regarding the claims, unless the claims were amended. (R 54-55)

a. The Examiner Erred in Rejecting the Claims 1, 2, 4, 8-12, 15, 64, 73 & 74 Under Section 103(a) Because the References Cited Fail to Provide a Written Description or Enabling Disclosure of the Claimed Technology.

We suggest that the Board consider claim 15 to be representative of this group of claims, as the Application (R 80, line 1) and our previous papers use XML as one example of a document encoding for input and output documents may embody in the claimed interface definition technology. Claim 15 adds to claim 1 the use of XML document type definitions (DTD).

The Examiner rejects claim 1 on the basis of McKendrick in view of the XML 1.0 Recommendation. (R 40-42) Following the first appeal, the Examiner refused to consider any argument regarding application of McKendrick to unamended claims, on the basis of *res judicata*. (R 53-55). Applying *res judicata* was error, as explained above, because *res judicata* does not apply when new evidence is submitted.

The Examiner erred in failing to evaluate the level of ordinary skill in the art, based on post-appeal evidence. This impacted the Examiner's interpretation of McKendrick for the reasons given above.

The Examiner erred when she interpreted claim 1 in a manner that does not particularly read on the exemplary embodiment provided on page 45 of the Application (R 120) and the additional examples in newly-submitted Exhibits G and I. Patent claims should be interpreted, if practical, in a manner that reads on at least one of the embodiments disclosed. Interpretation of the claims must be consistent with the interpretation that those skilled in the art would reach in light of the specification. MPEP §§ 2011-2011.01. The court must always read the claims in view of the full specification. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996). A claim construction that excludes a preferred embodiment, moreover, "is rarely, if ever, correct." *Helmsderfer v. Bobrick Washroom Equip.*, 527 F.3d 1379, 1383, 87 U.S.P.Q. 2d (BNA) 1216 (Fed. Cir. 2008); *Vitronics*, 90 F.3d at 1583; *see also C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 865 (Fed. Cir. 2004).

Instead of reading this claim on an interface definition technology, the Examiner effectively interpreted the claim to apply to any process related to an XML purchase order and an XML invoice. (R 40-42) This is the consequence of the Examiner's analysis, intended or not, because her application of McKendrick to the claim gives no

weight to the requirement for a machine readable specification of an interface, as claimed and exemplified in the Application. (R 120) McKendrick says nothing about any interface definition. The Examiner's interpretation is erroneous because it is contrary to the words the of the claim and is inconsistent with the technology disclosed in the exemplary embodiments.

The Examiner erred in arguing that McKendrick, by itself, discloses a machine-readable specification of an interface to transaction processes, including interpretation information providing a definition of an input document and a definition of an output document. (R 40). The level of skill in the art needs to be taken in account when McKendrick's brief article is interpreted. *Ex parte Jud*, Appeal No. 2006-1061 (Jan. 30, 2007) (expanded panel, informational opinion); (R 258-259). Two factors that *Ex parte Jud* identified as useful in evaluating the level of skill in the art were the level of detail in the applicants' disclosure and documentary evidence or references that were prepared for reasons other than use as evidence in patent prosecution. *Id.* at 4-5. In this case, the 1998 application was over 100 pages long, because the technology was new. It included extensive samples of code to enable practice of the invention. The Statement of Facts describes 1998 as the earliest early stage of applying XML to e-commerce. The Examiner mistakenly applied *res judicata* and, on that basis, declined to view McKendrick in light of the level of ordinary skill in the art, circa 1998. If the Examiner had applied the perspective of one of ordinary skill in the art, McKendrick clearly would not be considered enabling.

McKendrick does not provide a written description or enabling disclosure of any interface definition technology. Given the level of skill in the art, the Examiner erred in combining the identification of Innovision's OFX product (McKendrick, at 1, R 191) with remarks attributed to Microsoft (R 192) as a basis for "applying XML in financial area [sic] to provide better bank services and utilizing XML for on-line business transactions." (R 40) The mention of Innovision's OFX product¹ is not enough to qualify as a written

¹ A trial judge might well exclude McKendrick from consideration by applying the Best Evidence Rule (Fed. R. Evid. 1002), to the extent that the brief article repeats hearsay statements Innovision's product and Microsoft's reports. No expert witness would dare stake their credibility on McKendrick, without of tracking down the Innovision product and the original Microsoft report.

description or enabling disclosure of any interface definition technology -- it does not mention an interface definition or make any effort to teach how to build one. The brief article that only mentions Innovision's new product cannot be treated as providing a written description or enabling disclosure of the product. *In re Epstein, supra*. The attribution of certain remarks to Microsoft (R 192) includes only statements about how XML would, in the future, allow development of a rich array of business applications not yet implemented. The combination of these two passages provides names of two companies that might be contacted, but does not provide a patent law "written description" or "enabling disclosure" sufficient to teach one of ordinary skill in the art, circa 1998, how use the new XML programming language to develop the claimed interface definition technology.

The Examiner erred in reasoning that the quote from Microsoft, which mentions purchase orders and invoices in the context of potential future development, disclosed XML documents that "definitely include information providing the definition for such a document according to XML structures." (R 41) First, this reasoning does not read on the claimed interface definition technology. The reasoning ignores structure described as the machine readable interface specification limitations. Second, as set forth in a Statement of Facts, the XML programming language allows options for providing data type definitions. The XML language permits the documents referred to in McKendrick to be used without any machine-readable specification of an interface. The XML language allows documents to be self-describing, that is to carry their own datatype definition in the first few lines the XML document. Therefore, the reasoning about what might be inferred from the Microsoft quote in McKendrick does not qualify as prior art and does not support a rejection under Section 103.

The Examiner further erred in characterizing McKendrick as disclosing that "the transaction documents such as purchase orders and invoices in XML format for a business transaction over the Internet or user can search and buy an item online." (R 41, Examiner's underlining). McKendrick discloses the possibility of future development that would use XML with purchase orders and invoices. McKendrick does not disclose using XML over the Internet for a consumer to search and buy an item online. As indicated in a Statement of Facts, those of ordinary skill in the art in 1998 would not expect browsers to use XML. It is difficult to imagine how use of XML in

browsers for consumer online shopping would have anything to do with the claimed interface definition technology. The Examiner's proposed combination of McKendrick and the XML recommendation to produce a consumer Internet browser application used to "search and buy an item online" leads away from the claimed invention, rather than reading on it.

The Examiner erred in combining the XML language support for datatype definition (DTD) requirement with McKendrick to meet the limitations of claim 15. (R 48) Claim 15 describes one embodiment of a machine readable specification for an interface definition that uses DTD definitions compliant with XML to define input and output documents. This use of DTD definitions is illustrated in Exhibit G (imdesc.xml), Exhibit I (slide 30) and on page 45 of the Application. (R 578, 678, 120) Comparing page 9 of the XML 1.0 Recommendation (R 203), one sees that the XML language definition does not illustrate or suggest using DTD definitions in the manner depicted by the exhibits and the Application or as claimed.

Each of the errors committed by the Examiner during examination of claim 1 are considered by Applicants to be sufficient to justify reversal of the rejection under Section 103 of this group of claims.

b. The Examiner Erred in Rejecting the Claims 5-6 & 65 Under Section 103(a) Because the References Cited Fail to Provide a Written Description or Enabling Disclosure of the Claimed Technology.

As the Board considers these and the other dependent claims, we hope that will better appreciate the meaning of limitations in the independent claim and avoid any so-called "broadest reasonable interpretation" that would be inconsistent with the dependent claims.

The Examiner erred in combining a data dictionary (R 43), which is well known, with McKendrick and the XML 1.0 Recommendation to read on claims 5 and 65. These claims include limitations that require definition of an interface document type and use of a "document" of the defined interface document type to store an identifier of a particular transaction and define the interface specification. In an XML embodiment, that means using a document defined in XML as interface type document to hold the transaction identifier and definitions of other XML documents used for input and output.

When this claim is properly interpreted, adding a data dictionary to the other references is irrelevant to the claim.

We group claims 5 and 6 together because one calls for the interface document type to store an identifier of a particular transaction and the other calls for storing an identifier of the interface. The data dictionary described by the Examiner is not an interface document type (such as an XML compliant user-defined interface type document) and the data dictionary does not store the claimed combination of a transaction or interface identifier, plus definitions of other documents used for input and output.

Therefore, use of the well-known data dictionary technology does not result in a combination that reads on claims 5-6 and 65. The rejection of these claims should be reversed.

c. The Examiner Erred in Rejecting the claim 7 Under Section 103(a).

The Examiner erred in relying on the XML 1.0 Recommendation to supply the particular referencing structures of claim 7 that McKendrick lacks. The Examiner acknowledged that McKendrick does not include a reference to a specification of a particular transaction or further define the structure of the referenced specification. (R 43-44) The passage from page 3 of the XML 1.0 Recommendation (R 197) which the Examiner quotes, relates to the last element of claim 1, not the claimed referencing structure. Page 3 describes how definitions of XML documents comprise descriptions of sets of storage units and logical structures the sets of storage units. The passage quoted does not address the detailed structure of claim 7. It does not refer to a machine-readable specification that includes a reference (e.g., a pointer) to another specification, with the other specification including either definitions or references to definitions of input and output documents. Since the elements acknowledged to be missing from McKendrick and are not supplied by the XML 1.0 Recommendation they cannot be in the combination. Therefore, the rejection should be reversed.

d. The Examiner Erred in Rejecting the Claim 13 Under Section 103(a).

One example of the technology in claim 13 is a repository of datatype definitions (XML DTDs) used to define either the input or output document by reference. In other words, the node making use of the machine-readable specification would also need to

access to the repository to makes sense of the interface specification. The Examiner erred by misunderstanding claim 13 and characterizing it as "storing all data related to purchase transactions" in a repository memory. (R 47, middle) Storing "any defined data for a program in a network" (*id.*) says nothing about functionality, structure, or interrelationship parts of the data. The Examiner erred by making general statements in response to this claim without properly interpreting the claim or reading the cited art on the claim.

e. The Examiner Erred in Rejecting the Claim 14 Under Section 103(a).

Claim 14 further refines the repository of claim 13. The repository that contains document types (e.g., XML DTDs), further includes a document type for identifying participant processes in the network. The Examiner erred by referring to the existence of document type definitions, which are described in page 9 of the XML 1.0 Recommendation (R 203), without trying to find any example that applied data type definitions to identification of participant processes in a network. The Examiner erred by focusing on a feature that the XML programming language supports, rather than the claimed structure can be built using the XML programming language. No one of skilled in the art would understand the XML language support for document type declarations to read on our claimed implementation a repository of document types that includes a specific document type for identifying participant processes in the network.

f. The Examiner Erred in Rejecting the Claim 16 Under Section 103(a).

Claim 16 adds to claim 1 the use of a document organized according to an XML document type definition to contain the claimed machine readable data specification. Use of an XML DTD is expressly claimed here.

The Examiner again erred by referring to the existence of document type definitions, described on page 9 of the XML 1.0 Recommendation (R 202), without trying to find any examples of an XML document that in turn includes specifications or references the specifications of input and output documents, which define an interface definition. Support for a language feature should not be confused with sophisticated application of the programming language to support e-commerce.

g. The Examiner Erred in Rejecting the Claims 61 & 66-71 Under Section 103(a).

Claim 61 is a method for programming a commercial transaction. It includes defining a machine readable definition of an input document and an output document for a node that includes resources to execute process in a transaction. It further providing interpretation information for the logical structures of the input and output document to the node. The specification explains that the node can then be programmed using the definitions to generate datatype definitions, marshaling routines that convert input XML documents into Java objects, and unmarshaling routines that convert Java objects into an output XML document. (R 164)

The Examiner acknowledges the McKendrick does not explicitly disclose defining a machine readable definition of an input document or an output document, or providing interpretation information to the node that has the resources to execute the process in the transaction. (R 48-49)

The Examiner's rejection (R 49-50) has nothing to do with a method for programming transactions. The Examiner erred by failing to interpret the claim before writing the rejection. Neither McKendrick nor the XML 1.0 Recommendation describes how to go about programming a transaction on a node in the network.

h. The Examiner Erred in Rejecting Claim 72 Under Section 103(a).

Claim 72 adds to claim 61 providing a parser for the node responsive to logical structures in the definition of the input document and providing an event listener program responsive to event signals generated by the parser. These are specific implementation details for programming the node that includes resources to carry out a transaction process. The specific implementation details underscore the significance of addresses these claims as a method for programming.

The examiner erred by failing to provide a reference that includes a parser or a listener program. (R 50) There is no reference cited for any the elements in claim 72, which is reversible error.

In conclusion, we have traversed the Section 103(a) rejections with evidence that removes McKendrick as a reference and evidence regarding the level of skill in the art

in 1998, shortly after W3C published the XML 1.0 Recommendation. Whether McKendrick's brief article is removed as a reference or properly read in light of the evidence of the level of ordinary skill in the art, the present claims should be allowed over McKendrick. We respectfully request that all of the Section 103(a) rejections be reversed.

D. The Examiner Erred in Rejecting Claims 73-74 Under 35 U.S.C. § 112 Because the Word "Operations" in Claim 73 is Readily Understood by Reference to the Specification and the Extensive Code Samples of "Service Operations."

1. Section 112, First Paragraph.

Rejections under Section 112, first paragraph and Section 112 second paragraph of claims to 73-74 are new in the latest office action. Therefore, our response in this paper will be new to the Examiner. We invite the Examiner to withdraw the section 112 rejections.

The Examiner rejects the claims under Section 112, first paragraph as failing to comply with the enablement requirement. However, the rationale has nothing to do with enablement. (R 38-39).

The Examiner argues that an "operation", as that term is used in the specification, can only refer to an input document OR an output document. That is, only a one-way message, not a two-way exchange. This argument seems to be based on part of a code sample in the Application (R 100, line 26) that includes the quoted phrase "by way of input and output documents." The Examiner has erred in reading our specification. For instance, if the Examiner had read a few lines further on the same page of the application (R 101), the following description appears:

<H3>Service Operations</H3>

<INTRO><P>A service operation consists of a name, location and its interface, as identified by the type of input document that the service operation accepts and by the type of document that it will return as a result.</P></INTRO>

<ELEMENTTYPE NAME="service.operation">

<EXPLAIN><TITLE>Service Operations</TITLE>

<P>A service operation must have a name, a location, and at least one document type as an input, with one or more possible document types returned as a result of the operation.</P>

</EXPLAIN>

```
<MODEL><SEQUENCE>  
<ELEMENT NAME="service.operation.name"></ELEMENT>  
<ELEMENT NAME="service.operation.location"></ELEMENT>  
<ELEMENT NAME="service.operation.input"></ELEMENT>  
<ELEMENT NAME="service.operation.output"></ELEMENT>  
</SEQUENCE></MODEL>  
</ELEMENTTYPE>
```

This is one of several examples of an operation that involves two-way communication using input and output documents.

Therefore, claim 73 is supported and enabled by the specification and the rejection of claims 73-74 under Section 112, first paragraph, should be reversed.

2. Section 112, Second Paragraph.

The Examiner further rejects claims under Section 112, second paragraph, is being indefinite for failing to particular point out distinctly claim the subject matter which the applicant regards as the invention. The Examiner questions, "how an operation is performed for two processes for input document and an output document." (R 39) The Examiner's question has no basis in the wording of the claim. Claim 73 calls for "a machine-readable specification an interface to an operation [singular]... including interpretation information providing a definition of an input document, and the definition of an output document..."

As the claim wording uses a singular operation and the specification allows for one or more input and output documents, this rejection under Section 112, second paragraph should be reversed.

Reversal of both grounds for rejection under Section 112, first and second paragraphs, should clear the way for allowance of these claims.

IX. CONCLUSION

In view of the foregoing, Applicants ask that this honorable Board reverse the Examiner's rejections of the claims. In addition, it is submitted that all claims that are the subject of this examination are now allowable, and a notice of intent to issue a patent is respectfully requested.

The Commissioner is hereby authorized to charge any fee determined to be due in connection with this communication, or credit any overpayment, to our Deposit Account No. 50-0869 (File No. JGR 1004-1).

Respectfully submitted,

Dated: December 16, 2008

/Ernest J. Beffel, Jr./

Ernest J. Beffel, Jr., Reg. No. 43,489

Attorney for Patent Owner

HAYNES BEFFEL & WOLFELD LLP

P.O. Box 366

637 Main Street

Half Moon Bay, CA 94019

Telephone: 650.712.0340

Facsimile: 650.712.0263

X. CLAIMS APPENDIX

1. (rejected) An interface for transactions among nodes in a network including a plurality of nodes which execute processes involved in the transactions, the interface being stored in a computer readable medium, comprising:

a machine readable specification of an interface to transaction processes stored in memory accessible by at least one node in the network, including interpretation information providing a definition of an input document, and a definition of an output document, the definitions of the input and output documents comprising respective descriptions of sets of storage units and logical structures for the sets of storage units.

2. (rejected) The interface of claim 1, wherein the interpretation information includes data type specifications for at least one logical structure in the definitions of the input and output documents.

3. (rejected) The interface of claim 1, wherein the interpretation information includes at least one data structure mapping predefined sets of storage units for a particular logical structure in the definitions of the input and output documents, to respective entries in a list.

4. (rejected) The interface of claim 1, including a repository in memory accessible by at least one node in the network storing a library of logical structures, and interpretation information for logic structures.

5. (rejected) The interface of claim 1, wherein the machine readable specification includes a document compliant with a definition of an interface document including logical structures for storing an identifier of a particular transaction, and at least one of definitions and references to definitions of input and output documents for the particular transaction.

6. (rejected) The interface of claim 1, wherein the machine readable specification includes a document compliant with a definition of an interface document including logical structures for storing an identifier of the interface, and for storing at least one of specifications and references to specifications of a set of one or more transactions supported by the interface.

7. (rejected) The interface of claim 6, wherein the machine readable specification includes a reference to a specification of a particular transaction, and the

specification of the particular transaction includes a document including logical structures for storing at least one of definitions and references to definitions of input and output documents for the particular transaction.

8. (rejected) The interface of claim 1, wherein the storage units comprise parsed data.

9. (rejected) The interface of claim 8, wherein the parsed data in at least one of the input and output documents comprises:

character data encoding text characters in the one of the input and output documents, and

markup data identifying sets of storage units according to the logical structure of the one of the input and output documents.

10. (rejected) The interface of claim 9, wherein at least one of the sets of storage units encodes a plurality of text characters providing a natural language word.

11. (rejected) The interface of claim 8, wherein the interpretation information for at least one of the sets of storage units identified by a particular logical structure of at least one of the input and output documents, encodes respective definitions for sets of parsed characters.

12. (rejected) The interface of claim 8, wherein the storage units comprise unparsed data.

13. (rejected) The interface of claim 1, including a repository stored in memory accessible by at least one node in the network of document types for use in a plurality of transactions, and wherein the definition of one of the input and output documents includes a reference to a document type in the repository.

14. (rejected) The method of claim 13, wherein the repository of document types includes a document type for identifying participant processes in the network.

15. (rejected) The interface of claim 1, wherein the definitions of the input and output documents comprise document type definitions compliant with a standard Extensible Markup Language XML.

16. (rejected) The interface of claim 1, wherein the machine readable data structure including interpretation information comprises a document organized according to a document type definition compliant with a standard Extensible Markup Language XML.

17. – 60. (cancelled).

61. (rejected) A method for programming a commercial transaction in a network, comprising:

defining a machine readable definition of an input document for a node in the network including resources to execute a process in the transaction, and a machine readable definition of an output document for the node, the definitions of the input and output documents comprising respective descriptions of sets of storage units and logical structures for the sets of storage units; and

providing interpretation information for the logical structures to the node.

62. (rejected) The method of claim 61, wherein the interpretation information includes data type specifications for at least one logical structure in the definitions of the input and output documents.

63. (rejected) The method of claim 61, wherein the interpretation information includes at least one data structure mapping predefined sets of storage units for a particular logical structure in the definitions of the input and output documents, to respective entries in a list.

64. (rejected) The method of claim 61, the step of providing interpretation information includes providing a repository in memory accessible by at least one node in the network storing a library of logical structures, and interpretation information for logic structures.

65. (rejected) The method of claim 61, including defining a machine readable specification of an interface including a document compliant with a definition of an interface document including logical structures for storing an identifier of a particular transaction, and at least one of the definitions and references to the definitions of the input and output document.

66. (rejected) The method of claim 61, wherein the storage units comprise parsed data.

67. (rejected) The method of claim 66, wherein the parsed data in at least one of the input and output documents comprises:

character data encoding text characters in the one of the input and output documents, and

markup data identifying sets of storage units according to the logical structure of the one of the input and output documents.

68. (rejected) The method of claim 67, wherein at least one of the sets of storage units encodes a plurality of text characters providing a natural language word.

69. (rejected) The method of claim 67, wherein the interpretation information for at least one of the sets of storage units identified by a particular logical structure of at least one of the input and output documents, encodes respective definitions for sets of parsed characters.

70. (rejected) The method of claim 66, wherein the storage units comprise unparsed data.

71. (rejected) The method of claim 61, wherein the definitions of the input and output documents comprise document type definitions compliant with a standard Extensible Markup Language XML.

72. (rejected) The method of claim 61, including:

providing a parser to generate event signals in response to logical structures in the definition of the input document; and

providing event listener programs which respond to the event signals to execute the process.

73. (rejected) An interface for transactions among nodes in a network including a plurality of nodes which execute processes involved in the transactions, the interface being stored in a computer readable medium, comprising:

a machine readable specification of an interface to an operation stored in memory accessible by at least one node in the network, including interpretation information providing a definition of an input document, and a definition of an output document, the definitions of the input and output documents comprising respective descriptions of sets of storage units and logical structures for the sets of storage units.

74. (rejected) The interface of claim 73, wherein the interpretation information includes data type specifications for at least one logical structure in the definitions of the input and output documents.